

# The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

No. 133

May 2007

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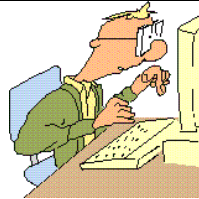
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## Editor's Desk

Victor Kozakevich

The other day, a Russian coworker at my company, after hearing of my interest in clocks, gave me a 1980 vintage windup alarm clock he'd brought over with him. A quick look confirmed that it was indeed made in Russia, and surprisingly high quality, with 11 jewels in the escapement.

I explained to him that the clock probably had some American "DNA" it, as back in 1929, the Russians had arranged to buy the financially troubled Ansonia Clock Company of Brooklyn, NY, and all its machinery.

A 1929 article titled "The Big Red Buyer" in *Time* magazine explains the purchase was part of one of Joseph Stalin's ambitious 5-year plans to industrialize the Soviet Union. In the Ansonia product line at the time were a number of good selling alarm clocks. The Russians expected to produce a million of those clocks every year.

As part of the same program, Stalin spent \$30 million to buy Ford car parts for assembly in Russia, until factories could be set up there. What do you bet, that Ansonia alarm clocks were able to get those future auto workers out of their warm beds and onto the production lines?

## Next Meeting

Thursday, May 3, 2007

7:00 PM. Meetings held at:  
Charles River Museum of Industry  
154 Moody Street  
Waltham, Massachusetts

## Membership Info

Annual dues of \$25 (via checks made payable to "NEMES" and mailed to our membership secretary) for the calendar year are due by December 31<sup>st</sup> of the prior year.

Missing a Gazette? Send mail or email to our publisher.

Addresses are in the left column.

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## ***President's Corner***

Dick Boucher

### **The Meeting**

This month Herb Cotterly has provided our speaker, Ray Harlan. Ray has been flying indoor model aircraft for over 50 years. In 1980 and 1982 he was U.S. Indoor Team Champion. In 1981 he won the Nagoya Cup in Japan's Invitational.

He has also won the U.S. National Championship in 2000 through 2006. Ray holds five national records in Ornithopter, Penny Plane and Electrics.

Ray's occupation is Mechanical Engineering and has developed tools for brain research and has been a visitor to our show in February.

Thanks Herb for finding such an interesting guest for us. Speaking of Herb, one could almost hear a gasp go through the room when he explained that the beautiful finish on his cabin cruiser was Rust-Oleum. A great model building secret revealed.

### **Miscellaneous Ramblings**

Bea and I had a great visit with Todd Cahill and Donna Dodson at Todd's studio in South Grafton. All of you know Todd's work from our shows and various engine meets that he exhibits at but a visit to the master's studio is a great event. Donna's carved wood sculptures are at a completely different end of the spectrum from Todd's iron and brass work but she exhibits the same care and finish in her medium that we recognize in Todd's work. I am not going to give you any insight to the wonder of Todd's studio but rather encourage you to take an afternoon off and visit yourself should Todd have another exhibition and open house in the future.

Speaking of taking an afternoon off, the show at Dunstable is May 6<sup>th</sup>. Don't plan on going in the afternoon, you will miss the show, it starts early in the morning and folds quite early. Dunstable has a close spot in my heart with engine shows as I first met Ron Ginger and Thumper there along with seeing Rollie Gaucher's Bentley aircraft engine there for the first time.

The next great event after that is Ed Rogers' car club's show at the Topsfield Fair Grounds on Route 1 in Topsfield on June 24<sup>th</sup>. This car show is a premier event in itself with many cars from early antiques to muscle cars and you will probably be able to see the car Mark Ames built and described at one on our meetings. Those of us who bring our models have a great time ruining them and enjoying the car show. One year, we had a great time riding around the grounds on Jeff Del Papa's three wheel recumbent bicycle.

See you at the meeting May 3<sup>rd</sup>.

*Dick B.*



## ***The Meeting***

Todd Cahill

Venerable President, Dick Boucher opened the meeting in The Appleton Room, which serves as our alternative space when the museum is holding an event on our meeting night. What was planned to be a meeting on model boat building with two of our members, Herb Cotterly and Ron Ginger speaking, turned into a meeting of show and tell by many members with Herb discussing the model boat he built. Ron was still digging out of a snowstorm in Maine, preventing him from making it to the meeting.

Mr. Boucher started out the round robin of show and tells with his affection for both the Dunstable, MA

engine show held on RT 113 on May 5<sup>th</sup> and a new periodical called Model Engine Builder. Dick claims the magazine has drawn his attention away from his collection of Model Engineer and Home Shop Machinist. Mighty high praise for a publication, indeed!

Frank Dorian announced that Andy, proprietor of The Tool Shed, will not be staying open late on our meeting nights any more and will close at the regular time of 5:00. So those of us that are raking through the mounds of great deals on used tools will have to get there a little earlier and spend less time there talking about the tools and more time buying them.

Henry Szostek told of a good deal for some Monarch 10EE lathes found at Brothers Machinery, which led to a discussion on what constitutes a good deal for such a fine machine. Should it cost dollars per pound or pennies per pound?

Ed Rogers promoted the annual model engineering display at The Topsfield Fair. It's predominantly a car show put on by The North Shore Old Car Club, however a nice site with a tent, plenty of amenities, good conversation has been provided for our M.E. club every year. There's lots of interest from the crowds and great deals to be found in the flea market. This year it's held on Sunday, June 24<sup>th</sup>.

Larry Keegan spoke of some methods of Rapid Prototyping that involved directing lasers into liquid soups and other techniques of building up layers of liquid plastic. He also expressed his interest in clock escapements.

President Emeritus, Norm Jones, spoke of another source for scale model hardware. American Model Engineering Supply Inc. carries nuts and bolts as well as an assortment of other supplies suitable to our interests. It's located at 890 Valastics Ave in Valparaiso, FL 32580. Tel: (850) 729-8549 [www.americanmodeleng.com](http://www.americanmodeleng.com). Norm also explained some problems a friend of his was having with a Drill Doctor not grinding proper clearance. He also was enticed into purchasing a carbide tool grinder from Harbor Freight Tools after seeing a sale price of \$129.95. At 110 pounds, it nearly matches the price structure of a dollar a pound for the

aforementioned Monarch 10EE at Brothers Machinery.

Howard Gorin spoke of a possible swap meet to be held at his place in Brookline some Sunday in May. He also discussed the possibility of another steam expo to be held at The Transportation Museum in Brookline.

Errol Groff showed some small parts he powder coated with a kit he purchased from Caswells. He also showed some shafts and sleeves he lapped. He also told of a trip he took to see the collection of scientific instruments at Harvard University. Finally, he had Max ben-Aaron choose the winner of a raffle he had to win a clock made in his school's shop. The proceeds went to the purchase of supplies for the shop.

Alan Bugbee told of an article on building a Rose Ornamental Turning Lathe out of MDF (Medium Density Fiberboard). There is a set of plans available from The American Association of Wood turners.

<http://www.woodturner.org/products/aw/>  
(pdf files under **Additional Content Spring 2007**)

Rollie Evans showed a bucket indicator, an apparatus for indicating the water level in a Stanley Steamer boiler from a remote location.

Yours truly brought in some wooden carvings of miniature tents used to produce some vacuum forms in clear plastic.

Dick Koolish told of our upcoming nominations of officers in the club in May and the subsequent elections that occur in June. He also discussed some of the intricacies of our club's status as a tax-exempt organization.

Harvey Noel brought in some examples of repairs he conducted on a South Bend Lathe. The first involved the worn square recesses on the adjustment screws on a four-jaw chuck. Harvey repaired the unusable recesses by inserting Allen head set screws and adhering with J-B Weld. The second repair shown was the repair of a broken tumbler gear lever, which involved a combination of screws and epoxy.

Herb Cotterly was introduced to discuss the fine model boat he built. Herb wanted to make a model of a boat he owns, which is a 32 ft Luhrs. He attempted to acquire the measurements or loftings of the hull from the company but to no avail, so he decided to take the measurements himself while the boat was moored. When the water was still enough, Herb used a plumb line and a ruler to get the measurements he needed to produce some templates for the model. The templates for the ribs were made of illustration board and used to make the ribs out of marine grade plywood. Herb then bent wet balsa wood planks over the ribs on an angle. Fine weave fiberglass cloth was then laid over the balsa wood planks with West Systems epoxy. This epoxy can be thinned with denatured alcohol and is less noxious than most resins.

The deck was made of marine grade plywood and epoxied in place. The canvas on the model was a small piece of the same type used on Herb's prototype. The railings were carefully laid out, drilled, bent, and silver soldered. The interior is complete, with a galley kitchen and head. A small stainless steel sink was replicated by sandwiching thin heated acetate between a plug and a plaster mold, after which it was painted with aluminum paint. Herb tried to locate some model engines for the boat but couldn't locate any so he made them out of jig plate.

The process for achieving the fine paint job revealed nothing exotic or complicated. Herb used ordinary Rust-Oleum paint in a spray can. Herb's advice on painting: don't buy or use old paint and use the same brand of primer as that used for the finish coat. Herb has about 1400 hours logged on building the model. My apologies for the absence of photos of Herbs fine boat and all the great projects people had to show.

*Todd*



## ***Shop Tips***

### **Molding a small part**

For a small static model of a radial aircraft engine (for the racer 'Mr. Mulligan'), I needed 18 identical rocker arm covers to position around the outside of the cowl. Each one is teardrop shaped, and the size needed was  $\frac{5}{8}$ " long by  $\frac{3}{16}$ " wide.

To make these parts, I started by carving one full size in wood to serve as a male mold. For the female mold material, I used Silly Putty (from Wal-Mart's kids' toys section). I rolled it out into a flat pancake on a sheet of glass and pressed my male mold into it, slowly, in a number of positions, each time carefully pulling the male mold straight up. Silly Putty has an oily texture, which acts as a release agent, so the inside of the female mold is smooth, with none of the Silly Putty sticking to the male. For a lump of Silly Putty the size of the one shown in the picture, the male could be pressed in 6 locations, so 6 covers could be produced in one run. The casting medium used was 30-minute 2-part epoxy, poured into each female mold.



The picture shows a lump of Silly Putty in which six female mold cavities had been pressed. In four of them, the cured epoxy males are still in place. Two cured male castings have been removed from their female cavities. Lying across one of the empty female cavities is the original wooden male, with a wood screw inserted for handling purposes. Adjacent to it is the remaining empty female cavity. Lying next to the Silly Putty are three examples of



the final castings. The epoxy castings are easily shaped, if necessary, with emery boards.

Silly Putty is reusable after a casting run is completed. It should be noted that the Silly Putty technique described would not be suitable for parts with undercuts; for such parts, an RTV mold medium would be more appropriate. Voids in the hardened epoxy due to bubbles were not a problem in the present application. However, if it were necessary, the epoxy mixture can be de-bubbled before pouring using a laboratory centrifuge or a vacuum, or by vigorously swinging the container of epoxy around manually at the end of a string. In any of these techniques, it is useful to have the epoxy mixture contained in a well capped plastic syringe, with the mixture injected into the mold directly from the syringe after de-bubbling.

*Marty*

Martin Feldman  
Owl's Head, Maine



## *Letters*

Guy Lautard (<http://lautard.com/tinker-s.htm>) sells plans and castings for a tool bit sharpener. It sounds interesting to me, with modest machining skills. Has anyone in the group made one of these and if so, how successful was the project? The castings are a little pricey, but they probably simplify the project somewhat. I have his instructions and they seem well thought out and not too difficult. The idea of rejuvenating that box of (former) milling cutters is appealing.

I would like to hear from anyone who has tackled this project as well as anyone who would like to try. Maybe buying several sets of castings can reduce the price a bit.

Bob Bober  
[bbober@walchem.com](mailto:bbober@walchem.com)

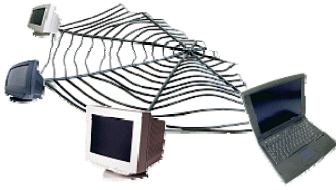
A couple of years ago, Carl West talked to NEMES about making armor. He is now giving blacksmithing classes at Prospect Hill Forge in Waltham. <http://www.prospecthillforge.com> I went to an introductory class last night offered through Brookline Adult Ed. We made an S hook with a twisted body. Here are some photos from the class:



More pictures from the class are on the web at:

[www.dickkoolish.com/rmk\\_page/pictures\\_042607\\_a.html](http://www.dickkoolish.com/rmk_page/pictures_042607_a.html)

Dick Koolish  
[koolish@alum.mit.edu](mailto:koolish@alum.mit.edu)



## ***Web Sites of Interest***

**NAMES show pictures on NEMES web page**  
Still photos from the 2007 NAMES show are can be viewed now. Video clips will be coming along soon.

[http://nemes.org/NAMES\\_2007/NAMES\\_2007.htm](http://nemes.org/NAMES_2007/NAMES_2007.htm)

Also to come are photos of the Armington and Syms machine shop at Greenfield Village at The Henry Ford, photos from the Air Zoo Aviation museum in Kalamazoo Michigan and photos from Steamtown in Pennsylvania.

### **CNC demo**

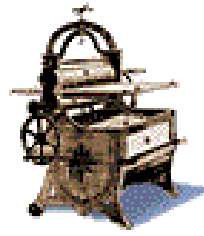
Machining a V8 block out of the solid - what that CNC does is really a must see. Tilting and moving the table in all directions and the spindle dancing up and down to reach the inner of the cylinders.

<http://www.youtube.com/watch?v=QsmileAkE-o&NR>

### **Outer space**

A beautiful celestial object christened the "Red Square" by Peter Tuthill, leader of the team is pictured here. The image was compiled with data from the 200" Hale Telescope at The Palomar Observatory.

<http://www.hypography.com/sciencearticle.cfm?id=11302>



## ***NEMES Gazette Editorial Schedule 2006***

Here are the closing dates for Gazette written contributions in the coming months:

<u>Issue</u>	<u>closing date for contributions</u>
June '07	May 25, 2007
July '07	June 22, 2007
August '07	July 20, 2007
September '07	August 24, 2007



## ***NEMES Mailing List***

Send an email to [nemes-subscribe@yahoogroups.com](mailto:nemes-subscribe@yahoogroups.com) with the word subscribe on the subject line and in the body of the message.



## ***For Sale***

### ***Gas Foundry Project***

Partially completed Gingery 3 piece stacked gas fired foundry. Lined with industrial grade refractory (not home brew). Probably handle a #8 crucible; easily handle a 1 lb coffee can. Needed to complete: lifting mechanism, and burner. Included: foundry body w/refractory, frame, plinth, and Gingery book on the construction. All offers considered, you pick it up in 12 miles west of Nashua, NH.  
Contact: Mac 603-533-4769

### **Shaper Work CD**

Put out in 1944 by the New York State education Department this 326 page manual is chock full of valuable tips and information on using the King of Machine tools....The Shaper. Covered is everything you need to know about the care and feeding of the shaper, use of the shaper, even how to sharpen tools for the shaper. Scanned and saved in Adobe Acrobat format. The CD now has a lot more info on it, and the price has increased accordingly. \$10.00, shipping included.

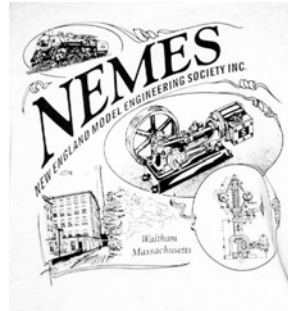
Errol Groff  
180 Middle Road  
Preston, CT 06365 8206  
[errol.groff@snet.net](mailto:errol.groff@snet.net)

### **NEMES Shop Apron**



Look your best in the shop! The NEMES shop apron keeps clothes clean while holding essential measuring tools in the front pockets. The custom strap design keeps weight off your neck and easily ties at the side. The apron is washable blue denim with an embroidered NEMES logo on top pocket.

Contact Rollie Gaucher 508-885-2277

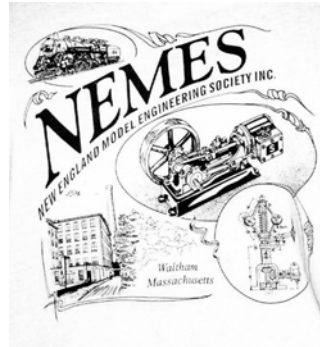


## ***NEMES clothing***

### **NEMES Tee Shirts**

NEMES tee shirts and sweat shirts are available in sizes from S to XXXL. The tee shirts are gray, short sleeve shirt, Hanes 50-50. You won't shrink this shirt! The sweat shirts are the same color, but long sleeve and a crew neck. Also 50-50, but these are by Lee. The sweat shirts are very comfortable!

Artwork by Richard Sabol, printed on front and back:



Rear



Front

### Prices:

	Tee Shirts	Sweat Shirts
S - L	\$12.00	\$22.00
XXL	\$14.00	\$24.00
XXXL	\$15.00	\$25.00

Add \$5 shipping and handling for the first tee shirt, \$1 for each additional shirt shipped to the same address. Sweat shirts are \$7 for shipping the first, and \$1.50 for each additional sweat shirt.

Profits go to the club treasury.

Mike Boucher  
10 May's Field Rd  
Lunenburg, MA 01462-1263  
[mdbouch@hotmail.com](mailto:mdbouch@hotmail.com)





**MARK  
THIS  
DATE**

## **Upcoming Events**

Bill Brackett

To add an event, please send a brief description, time, place and a contact person to call for further information to Bill Brackett at [thebracketts@verizon.net](mailto:thebracketts@verizon.net) or (508) 393-6290.

*Bill*

May 3 Thursday 7PM  
NEMES Monthly club meeting  
Charles River Museum of Industry  
781-893-5410  
Waltham, MA  
<http://www.neme-s.org>

May 5 Connecticut Antique Machinery Museum  
Spring Power Up  
Kent Ct. John Pawlowski President  
P.O. Box 1467, New Milford, CT 06776  
<http://www.ctamachinery.com/>

May 6 NHPOTP engine show  
RT 113 Dunstable MA  
Robt Wilkie 207-748-1092

May 20, 2007 Steam-up  
Waushakum Live Steamers  
Holliston MA  
<http://www.steamingpriest.com/wls>

May 20 9:00am The Flea at MIT  
Albany Street Garage at the corner of  
Albany and Main Streets in Cambridge  
<http://web.mit.edu/w1mx/www/swapfest.shtml>

May 22-23 9:00-5:00 and 24 9:00-3:00  
EASTEC at Eastern States Expo  
West Springfield MA  
<http://www.sme.org/eastec>  
800-733-4763

May 26-27 Bernardston Gas Engine Show  
Rt 10 off Rt 91 Bernardston, MA  
Vickie Ovitt 413-648-5215

May 26 American Precision Museum opens  
<http://www.americanprecision.org/>

May 27<sup>th</sup> Kids' Wheels, Vintage Cars & Antique  
Aeroplane Show  
Owls Head Transportation Museum Owls ME  
<http://www.ohtm.org/>

June 7 Thursday 7PM  
NEMES Monthly club meeting  
Charles River Museum of Industry  
781-893-5410  
Waltham, MA  
<http://www.neme-s.org>

June 10 Rods, Mods & Tuners & Antique Aeroplane  
Show  
Owls Head Transportation Museum Owls ME  
<http://www.ohtm.org/>

June 16-17 10:00-3:00 Father's Day Meet  
Pioneer Valley Live Steamers  
Southwick MA.  
<http://www.pioneervalleylivesteamers.org>

June 17 9:00am The Flea at MIT  
Albany Street Garage at the corner of  
Albany and Main Streets in Cambridge  
<http://web.mit.edu/w1mx/www/swapfest.shtml>

June 23  
Maine Coast BikeFest & Antique Aeroplane Show  
Owls Head Transportation Museum Owls ME  
<http://www.ohtm.org/>

June 24 Van Brocklin Meet  
Waushakum Live Steamers  
Holliston MA  
<http://www.steamingpriest.com/wls/>

June 23-24 Orange Show  
Orange Airport Orange MA

June 24 NSOCC Show  
Topsfield Fair Grounds  
Ed Rogers 781-233-3847  
<http://www.nsocc.org/homepage.htm>

June 28 Transportation & Technology Auction  
Owls Head Transportation Museum Owls ME  
<http://www.ohtm.org/>